



ARC-OVER

MAY 2020 EDITION

AA Capacity Testing
By: Spencer Boyd – KJ6ART

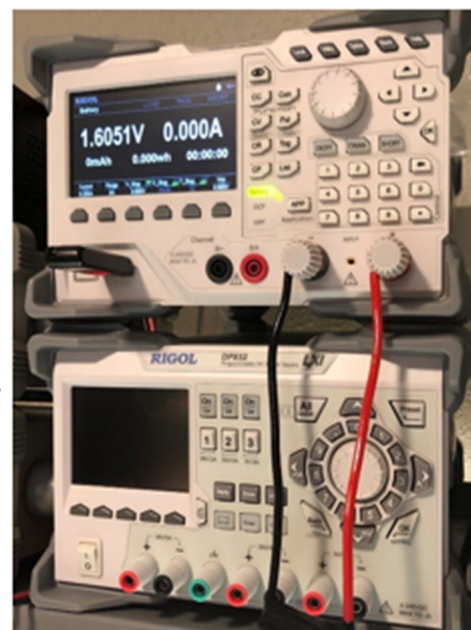


One morning on the "Beer and Pizza Net" Dick, K6SUU, was discussing cheap AA cells from Harbor Freight and the supposed capacity between the different models. Knowing that my new Rigol electronic DC load would be an excellent candidate for testing I broke in and offered to lend a hand and put the batteries through their paces.

After a little research on the topic I landed on some values to use for testing. One "generally approved" method is to place a 250mA load on the cells until they reach 0.8 volts. Thankfully for me the electronic load has a battery function that automatically logs watt hours and milliamp hours so late nights and early mornings were spared in recording the figures.

It should be noted there are many different ways to go about testing cells. Constant power, for example, is another widely popular method. Cell capacity also can differ with the load placed on them. Setting all of this aside, the test parameters I used will give plenty of knowledge when making our next trip to the bargain basement.

The test equipment for this project was a Rigol DL3021 which is a 200 Watt DC electronic load. The function of an electronic load is to place a precise load on whatever power source is connected to the input terminals, generally batteries or power supplies. To minimize voltage loss between the cells and the electronic load I used #12 wire taped onto the terminals of the cells. I tried a conventional AA spring holder first and found about 0.5 Volts loss between the cell and the load. I suspect this is due to the contact resistance of the springs and the microscopic wire.

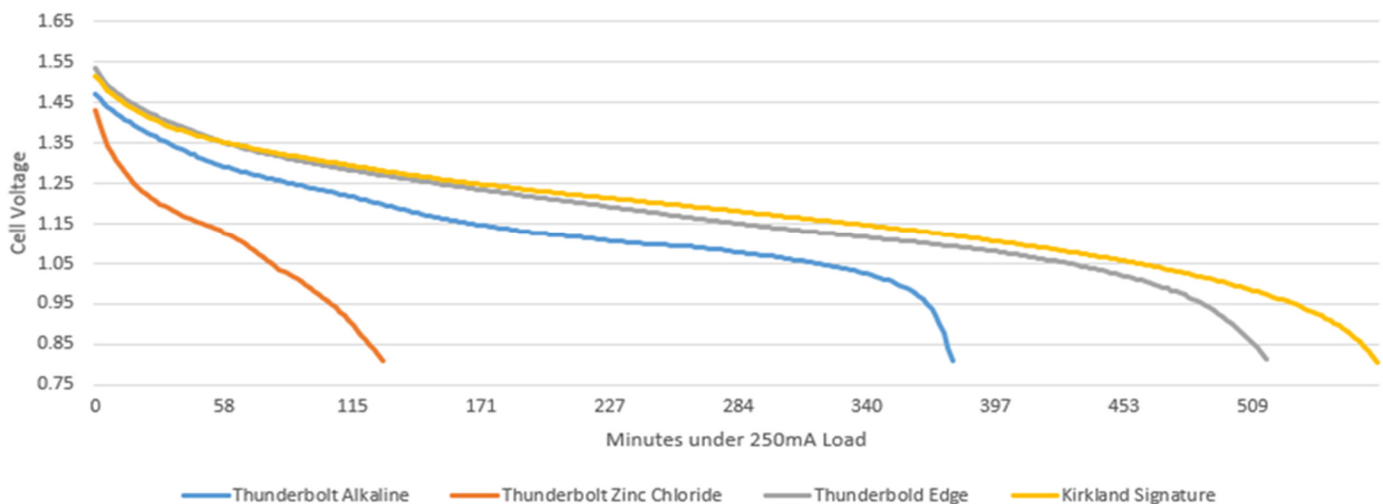


AA Capacity Testing (Continued)

With each cell taking upwards of eight hours to reach the 0.8 Volt cutoff it took three days to test all of the cells. Here are the results!

	Starting Voltage	Test Load	Capacity/milliamp hours	Capacity/watthours	Time to 0.8 Volts: h:mm	Price per cell
Thunderbolt Alkaline (1)	1.6154 Volts	250mA	1554mAh	1.79 wh	6:12	\$0.33
Thunderbolt Alkaline (2)	1.6156 Volts	250mA	1570mAh	1.827 wh	6:12	\$0.33
Thunderbolt Magnum: Zinc Chloride (1)	1.6573 Volts	250mA	533mAh	0.587 wh	2:08	\$0.16
Thunderbolt Magnum: Zinc Chloride (2)	1.6560 Volts	250mA	470mAh	0.502 wh	1:52	\$0.16
Thunderbolt Edge Alkaline (1)	1.6074 Volts	250mA	1934mAh	2.276 wh	7:44	\$0.49
Thunderbolt Edge Alkaline (2)	1.6078 Volts	250mA	1873 mAh	2.205 wh	7:29	\$0.49
Kirkland Signature (1)	1.6051 Volts	250mA	2128mAh	2.514 wh	8:30	\$0.35
Kirkland Signature(2)	1.6058 Volts	250mA	2122mAh	2.498 wh	8:29	\$0.35

Cell Comparison: Voltage over Time



W6BXN.org Overhaul
Spencer Boyd – KJ6ART

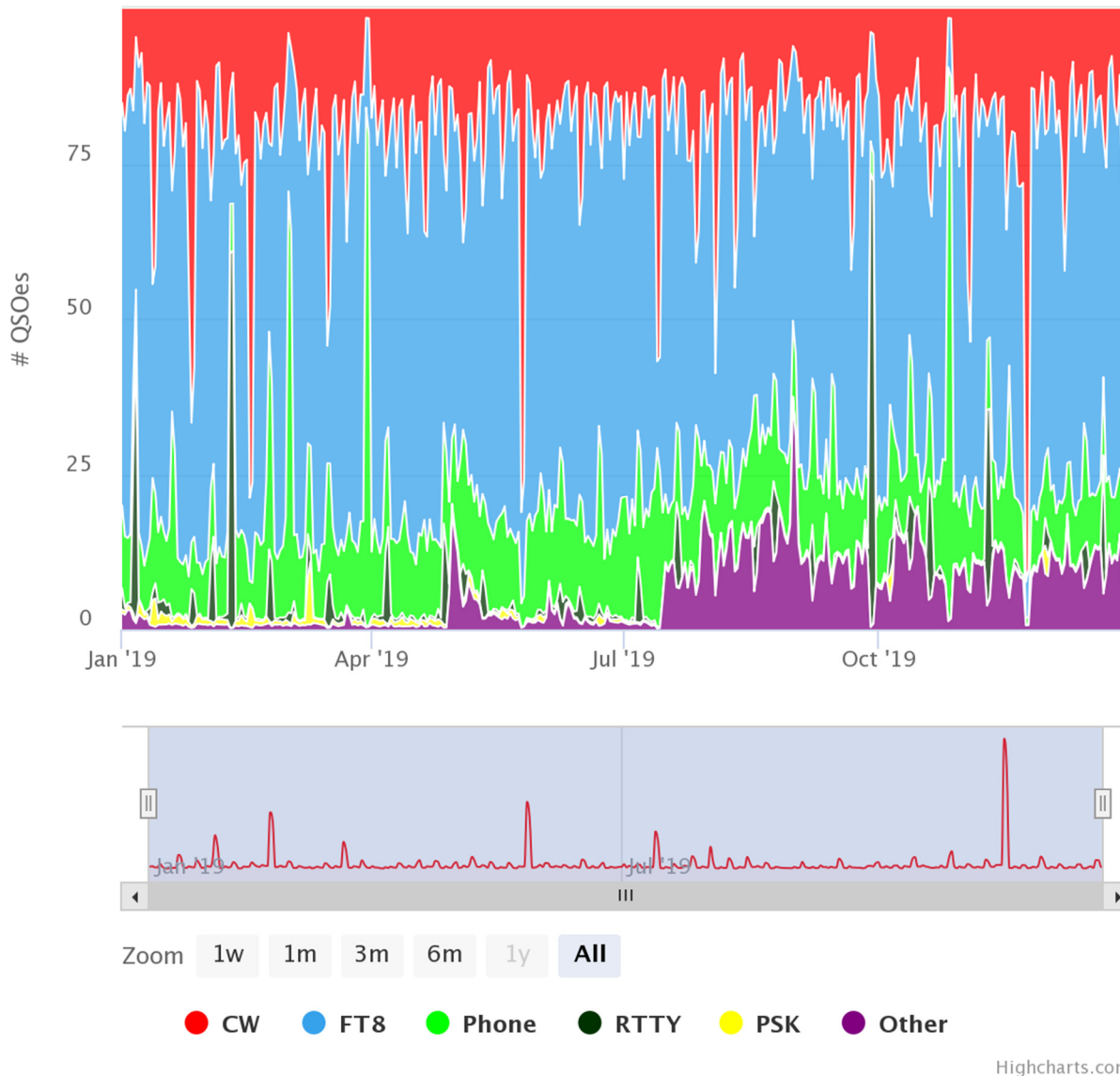
With a little extra time on my hands I decided it was time to give the club's website, W6BXN.org, a facelift. Although no major changes have been made, a handful of small changes have been implemented. A few of the changes include the updated roster page and Arc-Over archives. Going through my files I was able to retrieve most (I think) Arc-Over issues going back to 2014. If you have a moment pass through some of them, there's lots of good stuff. If you have any Arc-over issues that are not posted (including historic) please send them over, I'd love to get them posted.

Have you tried FT8?

By: Spencer Boyd – KJ6ART

Hearing some chatter regarding FT8 on TARC's repeaters I wanted to share some interesting statistics I ran across regarding total logged contacts comparing modes.

Mode distribution



The above graph shows logged contact's mode against time. Obtained from la8aja.com, data from ClubLog.

The graph shows 48% of all logged HF contacts in 2019 were made using FT8. That's crazy! Often tuning through the phone bands it seems like a band is "dead" but it's rare if FT8 has no activity. So, for all you HF naysayers, that's you Dick, give FT8 a try.

FT8 (Continued)

Although FT8 can certainly seem boring and repetitive at times it can be also be just as rewarding. Considering that meager power levels and primitive antennas can yield worldwide contacts it gives me renewed interest. FT8 also has a lot of potential in portable applications. A similar mode called JS8Call uses much of the same software. The big difference is there is no keyboard to keyboard in FT8 while the main application of JS8Call is freehand keyboard to keyboard messages. Be courteous, keep your power low, and try FT8.

Daisy McCoy SK

The younger generation of hams might say who the heck is Daisy McCoy? Well she is the wife of Mel McCoy WA6OPY affectionately known as "Old Yeller Punkin"... Mel was my supervisor during the early years with Pac Bell. The following story involving Daisy brought into serious question as to my personal integrity... The club made it a practice of honoring the ladies each Valentines Day with a nice dinner with appropriate gifts for a couple of the ladies... As chief prize getter and drawing official when the time came, holding out the drawing basket I nonchalantly instructed Ivy my lovely bride, why don't you draw Daisy's ticket, she hasn't ever won a prize... Darned if she didn't... Then in a move I shall ever forget, I instructed Daisy, turn about is fair play, why don't you draw Ivy's ticket... YOU guessed it !!! On 17 million to one odds she DID... Yet till today there are still those who still believe the whole thing was staged... Daisy was a neat person, a serious semi-pro golfer at the Modesto Golf Club... Men golfers hesitated to go off against her fearing to have their backsides severely whupped... Daisy had a sister who was married to a telco guy (all names withheld)... Chatting with Mel one day I mentioned this individual could be a real horses pat-tui at times... Mel admitted, he's my brother-in-law but your absolutely correct.. Learned right then and there to refrain commenting on Telco folks... Too much intercompany inbreeding... Daisy RIP

ARES 40 Meter NVIS TEST

On Saturday June 6, 2020 we will have our SJV 40 meter NVIS net exercise beginning at 1100 and scheduled to conclude at approximately 1300 (it could end earlier or go a little longer depending on circumstances).

This net will involve the entire SJV, from San Joaquin County to Kern County. There will be 4 NCS stations (Stanislaus County, Mariposa County, Tulare County and Mono County) . Please try to check in with as many of the NCS as you can. Not every NCS will hear every calling station (hopefully you will be heard by at least one NCS). HF can be fickle and we will have to see how the propagation is on the day of the net. The purpose of the exercise is to see how many stations can be heard throughout the SJV and to test our HF abilities and NVIS antennas.

Also if anyone wishes to practice their winlink skills I ask that you fill out an ICS214 in the winlink forms section and send it to me via winlink. In the to box in winlink just use my call sign kf6npg.

If you have not already completed your registration for the SJV 40 meter net in ARES connect I encourage you to do so. This will help us to track our member participation.

Please refer to the attached IAP (Incident Action Plan) for instructions regarding the net. If you have any questions please feel free to contact me.

I look forward to working with everyone during this exercise. Thanks for all of your assistance in making this a fun learning experience for our SJV ARES members.

Thanks,
Lucian Thomas KF6NPG
SJV Assistant Emergency Coordinator
Assistant EC Stanislaus ARES
KF6NPG@aol.com
cell 209-471-0103

YIKES! I thought it was a nasal swab!



Quips from K6YBV
(Dad of Movie Starlet Molly Ringwald)

I changed my iPod's name to Titanic. It's syncing now.

England has no kidney bank, but it does have a Liverpool.

Haunted French pancakes give me the crepes.

I know a guy who's addicted to drinking brake fluid, but he says he can stop any time.

A thief who stole a calendar got twelve months.

When the smog lifts in Los Angeles U.C.L.A.

I got some batteries that were given out free of charge.

A dentist and a manicurist married. They fought tooth and nail.

A will is a dead giveaway.

With her marriage, she got a new name and a dress.

Police were summoned to a daycare center where a three-year-old was resisting a rest.

Did you hear about the fellow whose entire left side was cut off? He's all right now.

A bicycle can't stand alone; it's just two tired.

The guy who fell onto an upholstery machine last week is now fully recovered.

He had a photographic memory but it was never fully developed.

When she saw her first strands of gray hair she thought she'd dye.

Acupuncture is a jab well done. That's the point of it.

I didn't like my beard at first. Then it grew on me.

When you get a bladder infection, urine trouble.

When chemists die, they barium.

I stayed up all night to see where the sun went, and then it dawned on me.

I'm reading a book about anti-gravity. I just can't put it down.

Bob Ringwald
Amateur (ham) Radio Station K6YBV
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**Meeting of the Turlock Amateur Radio Club
May 12, 2020 @ 7PM
Zoom Online Video Meeting**

Meeting called to order at 7:00 pm by President Bambi Schmidt (KI6YQL) with 25 members and guests in attendance.

Vice President's Report:

Vice President Dick Decker (K6SUU) reported that tonight's program will be by Spencer Boyd (KJ6ART) on current HF radios. The next program will be on valley SSB nets, more information to follow.

Membership Chairman's Report:

John Sims (N6JCS) reported we currently have 48 paid members on the club roster.

Treasurer's Report:

Report presented by Treasurer Mike Smith, (KG6VFL) reported that the club has \$2,160 in the checking account and \$7,964 in certificate of deposit. Expenses in the past month were \$48.44 to PG&E for the Mt. Bullion power bill and receipts were \$115 in dues collected.

Secretary's Report:

President Bambi Schmidt (KI6YQL) entertained a motion that the April minutes of the membership meeting be accepted as published in the ArcOver newsletter. Motion by Walter Schmidt (KI6PBL) and second by Spencer Boyd (KJ6ART). Motion carried.

Repeater Chairman's Report:

Grady Williams (K6IXA) reported that all is in good order.

ArcOver Publisher's Report: Grady Williams (K6IXA) reported items for the ArcOver are due by May 20, 2020.

Old Business: none.

New Business: none.

Motion to adjourn by Walter Schmidt (KI6PBL) and second by Spencer Boyd (KJ6ART). Meeting adjourned by President Bambi Schmidt (KI6YQL) at 7:20pm.

Minutes respectfully submitted by Secretary Greg Back (WA6LGS).

Program:

The program this evening was a very interesting presentation by Spencer Boyd (KJ6ART) on the current crop of HF radios covering features, price and performance. Thank you Spencer.

JUNE 9th Meeting

June 9th online zoom meeting program will be a presentation by Grady K6IXA on HF Radio Email for the KNLA (Karen National Liberation Army) in Burma.... Power point presentation with slides and video... Scenic tour of the Grand Palace and River Taxi ride in Bangkok... Radio Email installation in KNLA village across river in Burma... Visit to Mae Sot Clinic visited by Mrs Bush during trip to Chinese Olympics...

Lots of beautiful scenery and points of interest...